



Product Brief

Nortel Networks

Contivity 400 VPN switch for small offices and branch offices

Service providers and enterprises have been quick to see the merits of IP (Internet Protocol) VPN (Virtual Private Network) services to connect multi-location enterprises and supply chains.

Nortel Networks has led the customer-premises IP VPN market with a family of Contivity* systems that support up to 5000 simultaneous tunnels. Now the power of Contivity VPN Switches can be cost-effectively extended to connect small offices and home offices.

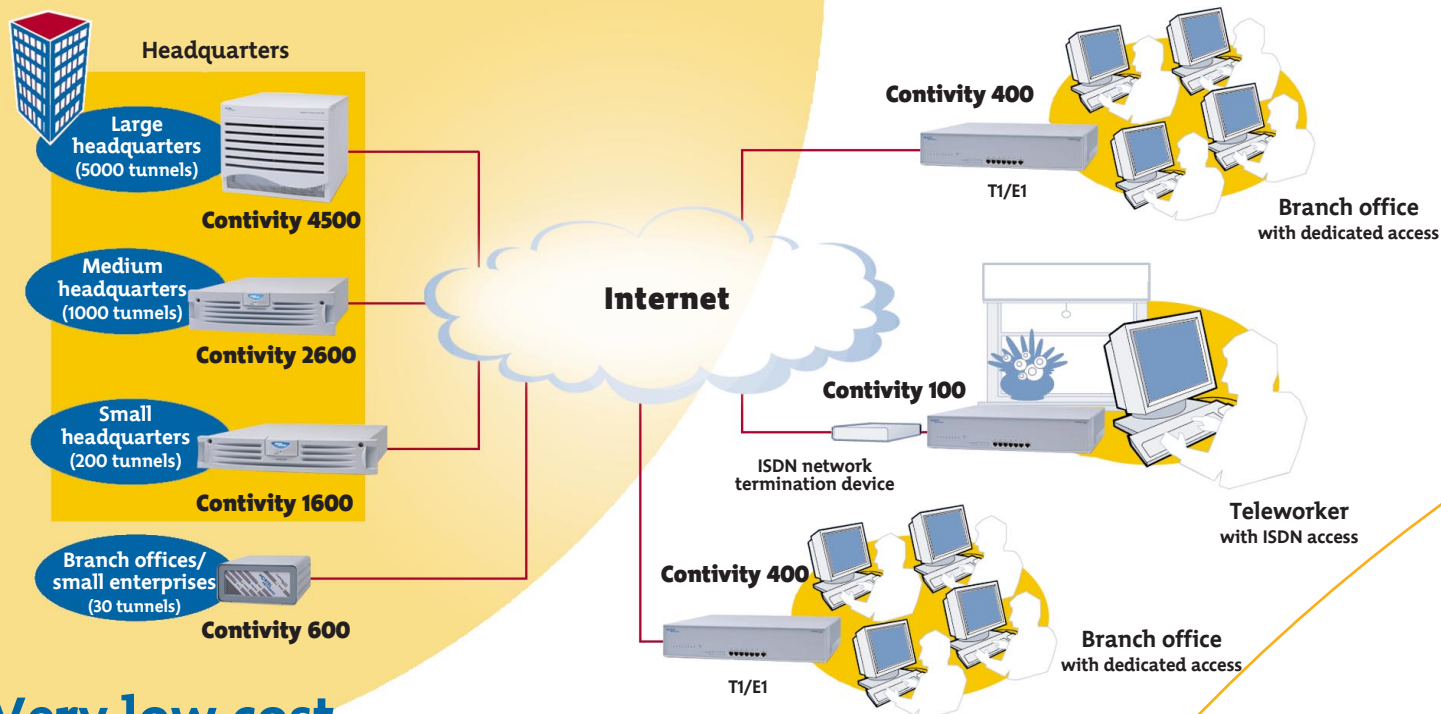
Announcing the cost-efficient Contivity 400 VPN switch, the ideal solution for setting up secure, encrypted, tunnels—for incorporating small satellite offices and teleworkers into a secure corporate network.

The Contivity family adds a new member to its product lineup: the Contivity 400. This is the ideal Contivity VPN Switch for small enterprises with multiple branch offices.

With support for encrypted, secure branch tunnels, the Contivity 400 is perfect for connecting small offices to headquarters and branch locations that use Contivity 600, 1600, 2600, or 4500 models.

Small businesses can now connect their headquarters with multiple branch offices, using secure, encrypted IPsec tunneling over the Internet. Due to its affordability, the Contivity 400 is the ideal choice for small headquarters offices, or for branches that require connectivity to several other branches.

**NORTEL
NETWORKS™**



Very low cost, secure VPN connectivity for small offices and branch offices

The Contivity 400 offers a complete set of site-to-site IP VPN features—including secure access to the Internet (and branch offices) through tunneling, firewall protection, authentication features, and encryption of data.

In addition, the Contivity 400 is ideal for enterprises that want instant, secure access to the Internet.

Branch-to-branch VPNs are taking off in popularity, yet enterprises may have difficulty cost-justifying high-end VPN devices at their smaller locations. Similarly, a growing number of enterprises have seen value in bringing outside organizations—such as suppliers, distributors, and retail outlets—into their communication networks, but must look closely at the business case for multiple small sites, such as retail outlets.

That's where the Contivity 400 comes in. As a standalone system, it's the low-cost answer for these small intranet and extranet sites.

What makes the Contivity 400 exceptional?

Low-cost, secure tunneling

The Contivity 400 supports IPsec branch tunnels—the data stream of each tunnel is wrapped within the format of the IPsec protocol, thereby enabling corporate communications to traverse securely on the public Internet.

WAN support

The Contivity 400 has multiple interfaces—dual analog, ISDN, and T1/E1/V.35/X.21—with backup ISDN support. In addition, it provides comprehensive leased-line and Internet support (such as point-to-point connections between two offices) through PPP and frame relay.

Protection from hackers

The Contivity 400 supports firewalling by proxy. This is a technique by which a server funnels all user requests to and from the Internet. By not opening a straight path between two networks, firewalling by proxy is designed to

prevent a hacker from obtaining internal addresses and details of the private network and its users.

Assurances for data integrity

The Contivity 400 accepts incoming traffic and sends outgoing traffic through authenticated, tunneled connections.

Data integrity is provided through SHA-1 (secure hash algorithm-1) or MD5 (message digest 5)—algorithms that create digital signatures. Contivity 400 users can choose the authentication method best suited to their application requirements. Furthermore, session initiation, management, and update functions for the Contivity 400 are protected by PAP (password authentication protocol) and CHAP (challenge handshake authentication protocol) security.

Both methods involve accessing a table of user IDs and passwords on a server to verify users when they log in. CHAP provides increased security by encrypting user IDs and passwords before transmitting them to the verification server.

Serving the price-sensitive, small office, branch office segment of the site-to-site IP VPN business market—to provide connectivity to headquarters offices and other branch locations that have larger Contivity VPN Switches

Cost-effectively

extend the performance

and security of Contivity VPNs to sites that require up to 30 tunnels

Advanced encryption to protect data traffic privacy

All Contivity 400 connections are encrypted for privacy, using both DES (data encryption standard) and triple DES (3DES) with pre-shared keys.

DES is an efficient method that uses a 56-bit encryption key. 3DES provides considerably more security by using multiple keys to encrypt, decrypt, and encrypt again. 3DES offers an effective encryption strength of 112 bits, even when a “meet-in-the-middle” attack is used against it. Users can pick the security method that best suits their application requirements.

Flexible deployment options

Each Contivity 400 model comes with two dedicated 10/100 Ethernet ports, along with a seven-port 10/100 Ethernet switch for office devices, plus a range of LAN/WAN interface options, including:

- T1 (with CSU/DSU)/E1/V.35/X.21 with ISDN backup
- V.90 dual analog modems
- ISDN (with and without NT1 network termination)

Using standards-compliant IPsec tunneling, the Contivity 400 is interoperable with other Contivity VPN Switches and BayRS routers.

Scaled and priced for the smallest applications

Designed for small offices and branch offices, the Contivity 400 is ideal for sites that require up to 30 branch tunnels. In a fully meshed configuration, there can be a mix of different Contivity models. A Contivity 400 switch at a branch will typically connect to a larger Contivity switch at headquarters.

Easy installation and automated LAN adaptation

Users can begin accessing the Internet immediately without changing workstation settings or changing the network configuration in any way. Existing subnetted intranets do not need to be changed or disrupted. Automatic detection of DHCP on the WAN side enables quick, configuration-free installation. Auto-DHCP avoids conflicts with existing DHCP servers during installation.

Integrated management

Remotely manage your Contivity 400 systems via an advanced, Web-based graphical user interface or CLI (command line interface) via Telnet.

All management functions and firmware updates can be performed over the Internet with password protection for security.

The industry-leading Contivity family

The Contivity 400 VPN switch is the newest entry in a complete product family that includes models scaled to suit applications from home offices to large corporate headquarters:

- The **Contivity 4500**, the premium offering in the Contivity family, provides secure, efficient VPN connectivity for up to 5000 tunnels.
- The **Contivity 2600** provides full-featured performance and security for locations that require up to 1000 tunnels.
- The **Contivity 1600** offers unusually flexible solutions for office centers, campuses, or branch offices needing up to 200 tunnels.
- The **Contivity 600** gives small branch offices/small enterprises the flexibility of up to 30 simultaneous VPN tunnels in both remote access and branch office settings.
- The cost-effective **Contivity 400** is targeted for branch offices requiring up to 30 branch tunnels.
- The economical **Contivity 100** provides basic branch connectivity for small offices and home offices requiring a limited number of branch tunnels.

This robust and easily managed technology has made Nortel Networks the global leader to service providers in the VPN gateway market, according to a 1Q2001 market analysis report from Synergy Research Group.

Technical specifications

Contivity 400

Up to 30 tunnels

Components

- Memory:
 - 64 MB RAM
 - 8 MB Flash memory
- Interfaces:
 - Two 10/100 Ethernet LAN ports
 - 7-port 10/100 Ethernet auto-sensing switch
 - T1(with CSU/DSU)/E1/V.35/X.21 with ISDN link backup
 - V.90 dual analog modems
 - ISDN (with and without NT1 network termination)
 - 1 PCI slot
- Contivity 400 software:
 - CD and on-line HTML documentation
 - Built-in web-cache for fast internal access

VPN capabilities

- Tunneling: IPsec
- Routing protocols: RIP v1, RIP v2, static
- Encryption: DES, 3DES
- Authentication: SHA-1 and MD-5 for digital signatures; PAP and CHAP for user logins
- Management: HTML-based user interface, command line interface (CLI) via Telnet
- Security: Stateful inspection in NAT, five-proxy firewall

Physical

Length: 17 in (43.2 cm)
Width: 15.5 in (39.4 cm)
Height: 3.5 in (8.9 cm)
Weight: 13.2 lb (6.0 kg)
Electrical: internal 85W, 100–240 VAC

Operating Environment

- Temperature: 32–104°F (0°–40°C)
- Relative humidity: 8–80% noncondensing
- BTU: 290 BTU/hour @ 240 VAC

In summary, if you're looking to provide robust, secure VPN services for small offices and branch offices—either for your own enterprise or to offer as a managed service—count on the Contivity 400 VPN switch, working with other members of the proven Contivity family.



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